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FILE 'REGISTRY' ENTERED AT 10:14:13 ON 26 JUN 2001

E META-TOLUYLENDIAMIN/CN

E TOLUENEDIAMINE/CN

L1

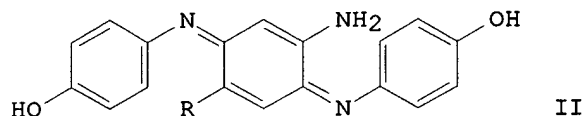
1 S E6

E METHYLBENZENEDIAMINE

E METHYLBENZENEDIAMINE/CN

E META-PHENYLENEDIAMINE, METHYL/CN

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2001 ACS  
 AN 1979:616661 CAPLUS  
 DN 91:216661  
 TI The role of meta difunctional benzene derivatives in oxidative  
**hair dyeing.** II. Reactions with p-aminophenols  
 AU Brown, Keith C.; Corbett, John F.  
 CS Clairol Res. Lab., Stamford, CT, 06902, USA  
 SO J. Soc. Cosmet. Chem. (1979), 30(4), 191-211  
 CODEN: JSCCA5; ISSN: 0037-9832  
 DT Journal  
 LA English  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 22, 25, 40  
 GI



AB In oxidative dyeing, oxidn. of p-aminophenols to p-benzoquinone  
 monoimines  
 is the 1st step in color formation. The monoimines react as a free base  
 at pH >8. Coupling of neutral monoimines with meta difunctional benzene  
 couplers as the free bases or anions results in the formation of  
 leucoindo  
 dyes which undergo rapid oxidn. to highly colored indo dyes. Oxidn. of  
 mixts. contg. both p-aminophenol (I) [123-30-8] and p-phenylenediamine  
 [106-50-3] results in preferential oxidn. of I. In the absence of  
 couplers, the resulting monoimine reacts with both unoxidized I and with  
 p-phenylenediamine to give analogs (II, R = OH and CH<sub>2</sub>) of Bandrowski's  
 base. In the presence of couplers, these latter reactions are suppressed  
 and reaction occurs preferentially with the coupler. The reactivity of  
 couplers towards monoimines is in the order resorcinol [108-46-3] >  
 4-amino-2-hydroxytoluene [2835-95-2] > 2,4-diaminoanisole [615-05-4] >  
m-aminophenol [591-27-5]. Thus, inclusion of p-aminophenols in oxidn.  
 dye formulations contributes significantly to the color produced on hair  
 and the resultant dyes have comparable stability to those formed from  
 p-phenylenediamine.

ST oxidn hair dye amino phenol; meta difunctional benzene hair dye  
 IT Oxidation  
     (of aminophenols, in hair dye prepn.)  
 IT Kinetics of coupling reaction  
     (of imines, with aminophenols, in hair dye prepn.)  
 IT Kinetics of hydrolysis  
     (of indophenol oxidative hair dyes)  
 IT Ultraviolet and visible spectra  
     (substituent effect on reactivity and, of aminophenols, in hair dye  
     prepn.)  
 IT Hair preparations  
     (dyes, oxidative, aminophenols reactions with coupling agents in  
     relation to)  
 IT 95-80-7 106-50-3, reactions 108-45-2, reactions 615-05-4

**823-40-5**  
 RL: RCT (Reactant)  
 (coupling reaction of, in oxidative hair dye formation)

IT 2835-99-6  
 RL: RCT (Reactant)  
 (coupling reaction of, with aminophenolate, in oxidative hair dye formation)

IT 95-88-5 496-73-1  
 RL: RCT (Reactant)  
 (coupling reaction of, with aminophenols)

IT 6358-06-1 53222-92-7  
 RL: RCT (Reactant)  
 (coupling reaction of, with monoimines, and oxidative hair dye formation)

IT 108-46-3, biological studies 591-27-5 2835-95-2  
 RL: RCT (Reactant)  
 (coupling reactions of, in hair dye formation)

IT 72083-93-3 72083-94-4 72083-95-5 72083-96-6  
 RL: PRP (Properties)  
 (cyclization and hydrolytic kinetics of, hair dye formation in relation to)

IT 24093-25-2P 71198-55-5P  
 RL: PRP (Properties); PREP (Preparation)  
 (formation and decompn. kinetics of, hair dye formation in relation to)

IT 3009-34-5P  
 RL: RCT (Reactant); PREP (Preparation)  
 (formation and hydrolysis of)

IT 106-51-4P, preparation  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, by hydrolysis of benzoquinone imine)

IT 71082-02-5P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in hair dye preps.)

IT 72083-92-2P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in oxidative hair dye formation)

IT 500-85-6P 2582-41-4P 2701-88-4P 24093-23-0P 24093-25-2P  
 30127-99-2P 30128-00-8P 52200-93-8P 72083-78-4P 72083-79-5P  
 72083-80-8P 72083-81-9P 72083-82-0P 72083-83-1P 72083-84-2P  
 72083-85-3P 72083-86-4P 72083-87-5P 72083-88-6P 72083-89-7P  
 72083-90-0P 72083-91-1P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in oxidative hair dyeing)

IT 31679-92-2P  
 RL: PREP (Preparation)  
 (prepn. of)

IT 2835-96-3  
 RL: RCT (Reactant)  
 (reaction of, with chlororesorcinol)

IT 95-87-4  
 RL: RCT (Reactant)  
 (reaction of, with methylbenzoquinone monoimine)

IT 4370-76-7 30168-96-8 30168-97-9  
 RL: RCT (Reactant)  
 (reaction of, with phenolate)

IT 4370-75-6  
RL: RCT (Reactant)  
(reaction of, with xylenol)

IT 123-30-8  
RL: RCT (Reactant)  
(reactions of, in oxidative **hair dyeing**)